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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,060

03/22/2004

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EXAMINER

STOUFFER, KELLY M

ART UNIT

PAPER NUMBER

1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,060	RICHERT ET AL.	
	Examiner	Art Unit	
	Kelly Stouffer	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 26 January 2007, with respect to the objections of the specification and claim 16 have been fully considered and are persuasive. The objections of the specification and claim 16 have been withdrawn.

2. Applicant's arguments filed 26 January 2007 with respect to the 35 USC 103(a) rejections of the claims have been fully considered but they are not persuasive. The applicant argues that Love in view of Shinohara et al. (hereafter Shinohara) does not disclose the elements of claim 11. The applicant uses letters a-l in the remarks filed 26 January 2007 to designate separate elements of claim 11, and those same designations will be used here. Love discloses a) in the abstract among several other places in the document. An inward transfer chamber, b), is either the entrance or exit chamber in column 5 lines 25-43 of Love. The adjoining buffer chamber, c), are the isolation chambers in column 5 lines 25-43 of Love, and its function as a buffer chamber is described in column 10 line 41-column 12 line 24, namely buffering pressure changes between the entrance or exit chamber and the coating chamber in column 11 lines 15-20. The process chamber, d), is the coating chamber as described in column 5 lines 25-43 and column 12 et seq. Similarly, the buffer chamber of e) and outward transfer chamber of f) are described in column 5 lines 25-43 et seq., with the buffer chamber function disclosed in column 10 line 41-column 12 line 24, namely buffering pressure

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changes between the entrance or exit chamber and the coating chamber in column 11 lines 15-20, and f) being either the entrance or exit chamber. The gates between the two buffer chambers (g)) and their respective adjacent inward and outward transfer chambers are opened and the pressure conditions are adapted to one another (j)-l)) during the method disclosed by Love (column 4 lines 3-24 and column 11 lines 3-20). The substrate of Love is also of a specified maximum size (abstract – part of element h)). Love does not disclose a substrate larger than the transfer chamber or buffer chamber (i)) or a buffer and transfer chamber that are of the same size (other half of h)). However, Shinohara et al. uses a similar procedure and apparatus as Love (Shinohara et al. does not use physical but separates the chambers with gas outlets that may be considered gates at least as broadly described by claim 11 and may be considered analogous to the physical gates of Love), and teaches transfer chambers 407 and 410 that are of the same size of buffer chambers 408a and 408b in Figure 4 with a substrate large enough to require the transfer and buffer chambers to be open to one another in order to continuously coat a large substrate (paragraphs 0004-0005 et seq.) Therefore, in combination, Love in view of Shinohara discloses the elements a-l. One of ordinary skill in the art would combine Love and Shinohara because though they might be classified as inline and batch apparatuses, the two both use similar procedures and apparatuses and one of ordinary skill in the art could easily conceive of the two inventions being combined to continuously coat a larger substrate.

Therefore, the rejections of the previous office action are maintained and are repeated here in their entirety.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claims 11- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent number 4274936 to Love in view of US publication 2002/0020496 to Shinohara et al.

Regarding claim 11, Love discloses a method for the operation of a an in-line coating installation having an inward transfer chamber, buffer chamber, process chamber, buffer chamber, and outward transfer chamber with gates between the chambers that can be opened and closed. (Described as entrance and exit chambers, coating chambers and isolation chambers in column 5 lines 25-43.) The gates between the two buffer chambers and their respective adjacent inward and outward transfer chambers are opened and the pressure conditions are adapted to one another during the method disclosed by Love (column 4 lines 3-24 and column 11 lines 3-20). The substrate of Love is also of a specified maximum size (abstract). Love does not disclose a substrate larger than the transfer chamber or buffer chamber or a buffer and transfer chamber that are of the same size. Shinohara et al. uses a similar procedure and apparatus as Love (Shinohara et al. does not use physical but separates the chambers with gas outlets that may be considered gates at least as broadly described by claim 11), and teaches transfer chambers 407 and 410 that are of the same size of buffer chambers 408a and 408b in Figure 4 with a substrate large enough to require the transfer and buffer chambers to be open to one another in order to continuously coat a large substrate (paragraphs 0004-0005 et seq.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Love to include a substrate larger than the transfer chamber or

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buffer chamber or a buffer and transfer chamber that are of the same size as taught by Shinohara et al. in order to continuously coat a large substrate.

Regarding claim 12, Shinohara et al. has a conveying system for the substrate that has a constant rate throughout the chambers (as the substrate is so large it is inherent), and Love discloses each chamber having its own transportation system (column 10 lines 8-40).

With regard to claim 13, Love shows a process chamber 2 with a left and right boundary formed by slit diaphragms 90 and 110 in Figure 1.

With regard to claim 14, the sequence of opening and closing of valves is disclosed by Love in the section labeled "Operation" in columns 13-18 et seq. One of ordinary skill in the art would recognize that if the substrate was larger than either of the transfer or buffer chambers, that valve would have to be open to process the substrate in those chambers, as taught by Shinohara et al. above.

Regarding claim 15, Love discloses pumps associated with the inward transfer chamber that pump the chamber from atmospheric pressure to a lower pressure with roughing pumps (column 8 et seq) and pumps associated with the buffer chamber that pump the chamber closer to the pressure of the coating chamber (the absolute pressure of the system in column 11 lines 21-40).

Regarding claim 16, Love discloses the first pressure to be below 500 microns in column 8, with is approximately 7 mbar when converting units, and 0.01-0.001 microns in column 11 lines 21-40 which is approximately 0.05 mbar.

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Regarding claims 17 and 18, Shinohara et al. shows the same transportation arrangements and rates as discussed above for both the transfer and buffer chambers.

Regarding claims 19 and 20, Love discloses controlling pressures and opening and closing gates with a control and manifolds in the abstract, column 6 lines 19-37, column 7 lines 56-62 and other locations throughout the document.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly Stouffer whose telephone number is (571) 272-2668. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

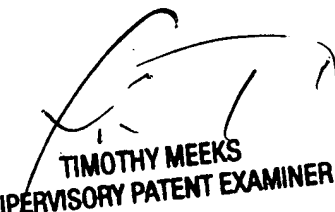
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kelly Stouffer
Examiner
Art Unit 1762

kms


TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER